

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
RENTON, WASHINGTON 98055-4056**

Exemption No. 5289

In the matter of the petition of

REGIONAL AIRLINE ASSOCIATION

Regulatory Docket No. 26431

for an exemption from §§ 121.314
and 135.169(d) of the Federal
Aviation Regulations

PARTIAL GRANT OF EXEMPTION

By letter dated December 21, 1990, Mr. William C. Keil, Director, Technical Services, Regional Airline Association, 1101 Connecticut Ave. N.W., Suite 700, Washington, D.C., 20036, petitioned for exemption from §§ 121.314 and 135.169(d) of the Federal Aviation Regulations (FAR) to permit up to a twelve month extension in the compliance time for the retrofit of Class C and D cargo compartment liners. The petition is on behalf of all affected operators.

This request is for certain large transport airplanes for which the late arrival of service bulletins and extensiveness of the modification will make timely compliance impracticable. In addition, relief is requested for all affected airplanes with respect to repairs.

Sections of the FAR affected:

Section 121.314, as amended by Amendment 121-202, and Section 135.169(d) as amended by Amendment 135-31, require, in part, that after March 20, 1991, all Class C and D cargo compartments greater than 200 cubic feet in volume used on airplanes in air carrier, air taxi, and commercial service have liners constructed of fiberglass or material satisfying the test requirements of § 25.855, as amended by Amendment 25-60, or in the case of liners approved prior to March 20, 1989, aluminum.

Related Section of the FAR:

Section 25.855(a-1)(1), as amended by Amendment 25-60, incorporates a new flame penetration test using an oil burner. This test is required of liner materials in Class C and

D cargo compartments on affected airplanes, regardless of whether or not the material is fiberglass. These test standards are contained in Appendix F, Part III, of Part 25.

ANM-91-014-E

The petitioner's supportive information is as follows:

"Regional airlines have made diligent efforts to comply with these requirements by the specified date. Because of limited engineering capabilities, they have relied on the availability of approved service bulletins and parts kits from the manufacturers of affected aircraft.

"RAA has recently been advised by manufacturers and operators of Embraer EMB-120, Fokker F-28, and Saab SF340 airplanes, that they are experiencing problems with availability, delivery, and/or cost of materials needed to comply with these new requirements:

"Embraer Aircraft Corporation has advised RAA that its latest estimate of parts availability is February, 1991.

"RAA is aware of petitions from Westair Commuter Airlines, Inc., and Comair, Inc., operators of EMB-120 airplanes, requesting relief from the compliance date because of inability of the manufacturer to supply necessary parts and service bulletin instructions until after the required date.

"Fokker Aircraft USA, Inc., has advised RAA that it is unable to provide parts for all US-registered F-28 aircraft in time to meet the required date. Fokker estimates a delay of six months beyond the March 20, 1991, requirement.

"Operators of Saab SF340 airplanes have recently learned from the manufacturer that parts will be available in time to meet the current deadline, but they are not yet available for shipment.

"The cost of modification kits for Saab SF340 airplanes is approximately \$60,000 per airplane (discounted to \$40,000 for firm orders prior to mid-December, 1990).

"Operators of Embraer EMB-120 and Fokker F-28 airplanes will, therefore, require an extension of the compliance date of March 20, 1991, in order to avoid grounding of non-complying aircraft until parts are received.

"Operators of Saab SF340 airplanes are facing a more difficult problem - which is a significantly higher-than-expected cost to comply with this regulation. They consider a cost of up to \$60,000 per airplane to be far beyond what they

or FAA believed to be realistic for replacement of sidewall and ceiling liners with fiberglass or other approved material. This unexpected cost, coming on top of new regulatory requirements such as TCAS, CVR, FDR, high fuel costs, the growing US economic recession, etc., threatens the survival of many affected small commuter airlines. These operators do not question or object to the desirability of improved liners in the cargo/baggage compartments. They do, however, want to find the most cost-effective manner in which to comply. Had they known that the cost to be quoted by the manufacturer would be of this magnitude, they would have thoroughly explored alternative methods of compliance. It is, therefore, for this purpose that Saab SF340 operators request additional time for compliance.

"In requesting this one-year time extension, RAA acknowledges that alternative action must be proposed in order to provide an equivalent level of safety. It is proposed, therefore, that airplanes which do not comply by March 20, 1991, must be subjected to more frequent maintenance inspections of affected compartments to assure that the liner panels, fasteners, joint seals, etc. continuously meet the design and certification requirements. The details of such inspection requirements should be developed between operators and their PMI's. RAA would, of course, be available for assistance if desired.

"RAA believes that a one-year extension of the compliance requirement would be in the public interest because, in the case of EMB-120 and Fokker F-28 operators, there would be no exposure to disruption of scheduled service. In the case of Saab SF340 operators, an extension would enable them to explore the possibility of other means of compliance at a lower cost which would not threaten their economic survival."

A summary of the petitioner's December 21, 1990, request for exemption was published in the Federal Register on February 6, 1991, (56 FR 4896). No comments were received.

The Federal Aviation Administration's analysis/summary is as follows:

The petitioner's request is limited to an extension of the compliance time, as opposed to permanent relief from the modifications required. The compliance time established in the regulation was based on a reasonable estimate of the time required to accomplish the necessary design changes and modifications, taking into account the relative urgency and scope of the needed upgrade. As such, the compliance time may be subject to adjustment under certain conditions, where the assumptions made to establish the compliance time are no longer valid.

In this case, the petitioner has requested relief from the compliance deadline for three specific model airplanes. The requested relief is based on the need for operators of these airplanes to rely on the manufacturer to provide essential service information for accomplishment of the necessary modifications. Typically, these operators are relatively small with little engineering or manufacturing capability. As noted by the petitioner, the airframe manufacturers have not provided service information in a time compatible with

the compliance deadline. Depending on the original design of the cargo compartment, the extent of the modifications required for compliance differs with airplane model. Some airplanes require modification only to design features, while on others the basic panels must be changed. The petitioner's request for relief, while containing data to this effect, would essentially result in overly generous extensions in some cases.

The petitioner proposes that operators will accomplish all required modifications on affected airplanes; however, the petitioner has proposed a time considerably longer than was envisioned by the regulations. The purpose of the retrofit requirements of § 121.314 is to upgrade the overall cargo compartment safety on airplanes in service in a timely manner. The two-year compliance time chosen in the regulation was considered adequate to allow for the majority of installations to be modified and commensurate with the potential hazard. The petitioner notes that operators have made a good faith effort to comply with the requirements in the allotted time; however, due to the late availability of service information from the airframe manufacturers and the uncertainty over the components that require modification, they will not be able to initiate the required modification schedule in time to comply, without causing out-of-sequence maintenance. In addition, the cost estimates used to develop the regulation are not representative of the actual costs as noted in the manufacturers service bulletins. In those cases where compliance by the required date cannot be achieved, airplanes would be grounded.

The cost estimates used in developing the regulation were based on the assumption that retrofit could be accomplished during normal maintenance and that airplanes would not have to be taken out of service to accomplish the necessary modifications. In addition, the actual material costs were underestimated, largely because manufacturers were unsure as to the total impact of new requirements on their design.

The petitioner relies heavily on the cost of compliance as justification for relief for SAAB SF-340 airplanes. While cost alone is not justification for granting relief, the FAA is aware that the manufacturer's kits for compliance have only become available recently. The FAA has therefore concluded that the petitioner's arguments concerning delays experienced with the other models are equally applicable to the SF-340 airplanes.

While the FAA agrees that an extension of the compliance time is warranted, the extension requested by the petitioner is considered to be generally longer than that needed to accomplish the required modifications. Since all of the airplanes will be modified to comply with § 121.314, the net effect on safety of a relatively short extension is negligible. While the extension of the compliance time is longer for some airplanes, the affected components comprise a relatively small portion of the total cargo compartment liner for those airplanes, and a limited time extension for replacement or modification is also considered to be insignificant from a safety standpoint. Since some of the modifications can be accomplished during a much shorter maintenance visit, and since these occur more frequently, the FAA has determined that an overall reduction in the requested extension is appropriate.

The FAA has carefully reviewed the data provided by the petitioner and has concluded that due to a variety of factors, including some potentially confusing information in the preamble to the regulation itself, a partial grant of exemption is warranted. However, as noted above, the relief granted should be based upon the impact of compliance for each affected model. Therefore, the FAA has determined that the following schedule of relief is appropriate :

<u>Airplane</u>	<u>Relief</u>
SAAB SF-340	one year
Embraer EMB-120	nine months
Fokker F-28	nine months

Another aspect of this issue is the status of repairs in existing cargo liners. As noted in a petition from the Air Transport Association of America (ATA), Docket 26400, repairs which comply with the requirements of § 121.314 have only recently been developed. Since virtually every cargo compartment liner in service has some amount of damage which has been repaired, it has not been possible for the existing repairs to be replaced with complying repairs until now. Repairs were not given detailed examination during the development of the regulation since the FAA was not aware of the extent of the technological problem. The justification and details of the repair issue are discussed in detail in the ATA exemption. The FAA has granted Exemption No. 5288 to allow an additional one year to upgrade existing repairs. This exemption, which is applicable to all Part 121 or 135 operators of transport category airplanes, will allow implementation at "C" check intervals for most airplanes, although it should be possible to make some of the upgrades on the ramp. New repairs will be required to comply within six months of the compliance date.

In consideration of the foregoing, I find that a partial grant of exemption is in the public interest and will not affect the level safety provided by the regulations. Therefore, pursuant to the authority contained in §§ 313(a) and 601(c) of the Federal Aviation Act of 1958, delegated to me by the Administrator (14 CFR 11.53), an exemption is hereby granted to permit operation, under the provisions of Parts 121 and 135 of the FAR, with airplanes that do not comply with the provisions of §§ 121.314 and 135.169(d), in accordance with the following:

1. This exemption is limited to the SAAB SF-340, Embraer EMB-120, and Fokker F-28 series airplanes.
2. This exemption expires as follows:
 - a. For the SF-340: March 20, 1992
 - b. For the EMB-120: December 20, 1991
 - c. For the F-28: December 20, 1991

Issued in Renton WA, on March 18, 1991.

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